Commercial Technology Transition Office

Your partner in Rapid Technology Transition

Naval-Industry R&D Partnership Conference 2005

Informational Session

“Doing Business with the Navy”

26 JUL 05

History

- The Commercial Technology Transition Office (CTTO) was established in 1999 by ASN(RDA)
  - PPBE process takes too long to transition advanced technology to meet warfighter urgent/emergent needs
  - Provide ‘bridge’ funding to Programs of Record with ‘now’ year dollars.
- A Rapid Technology Transition (RTT) Program Element was established in FY04

Commercial Technology Transition Office (CTTO)

Mission

To *rapidly* transition technology from *any source* into the Fleet/Force

CTTO

Matchmake
Solutions to Naval Needs

Naval Acquisition Programs

PEOs / SYSCOMs

Deal

Memorandum of Agreement

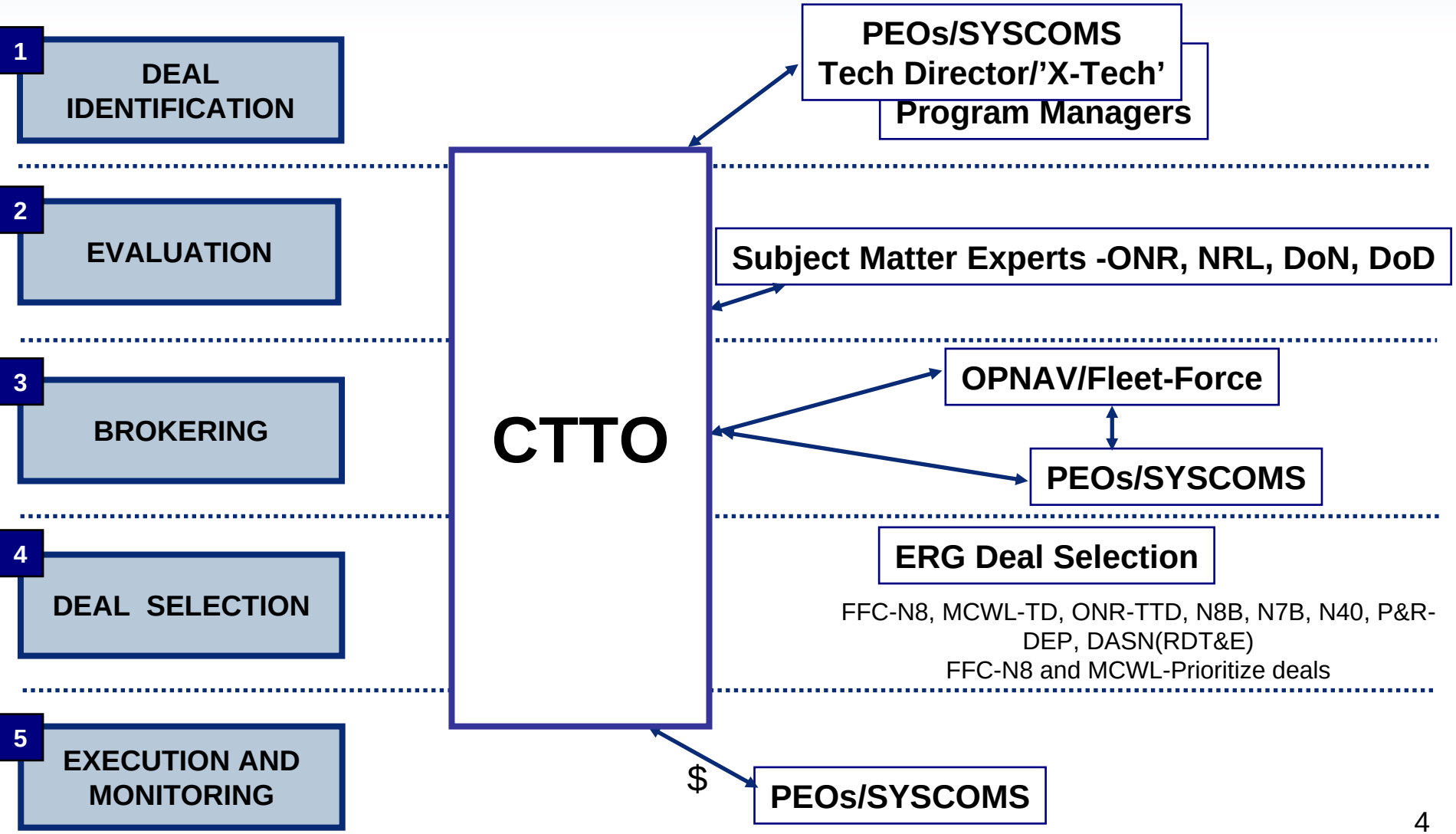
ERG Deal Selection

Rapid Technology Transition Program $s

CTTO is the Deal Broker for Technology Transition

Organization and Process

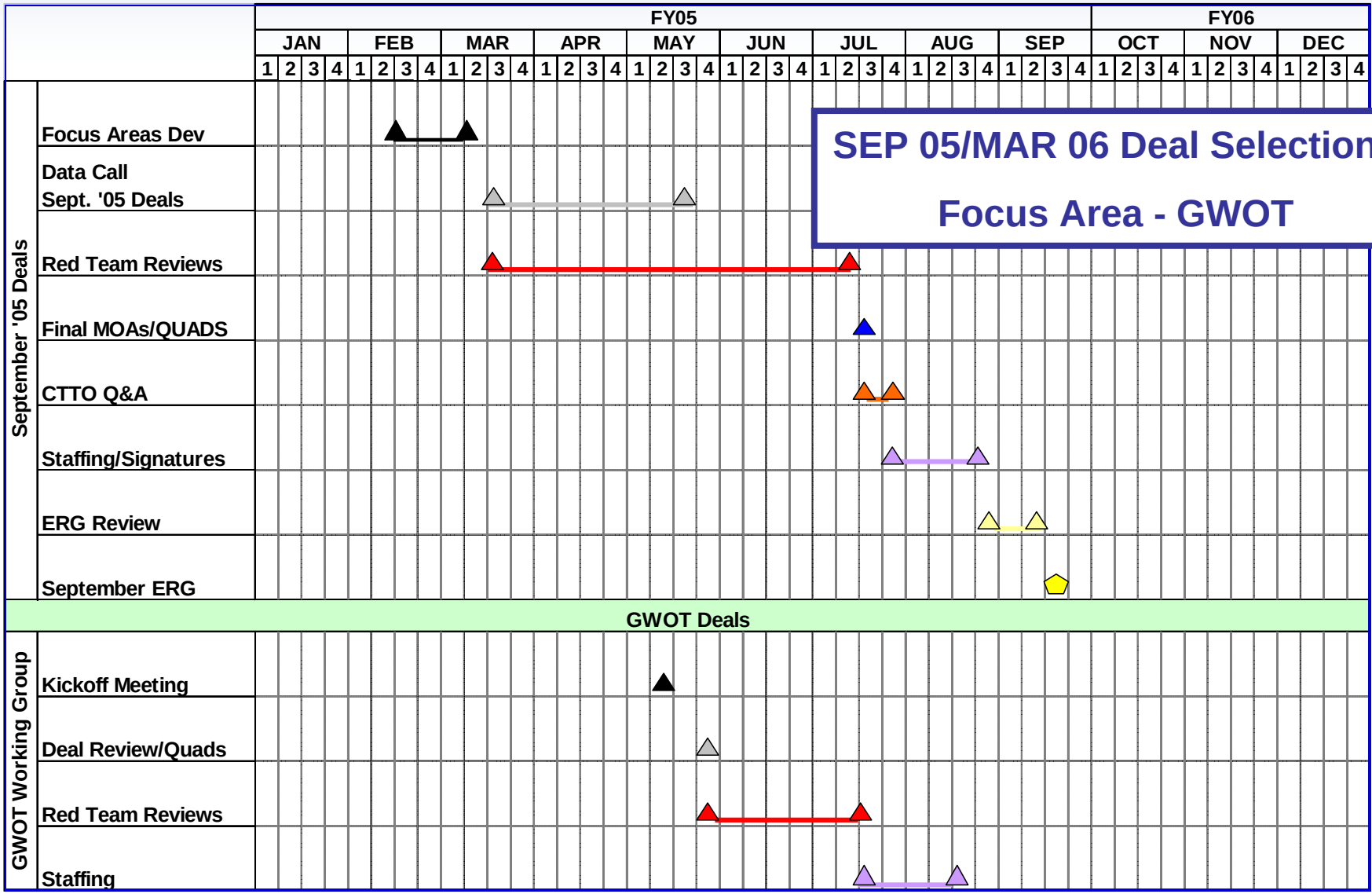
GWOT RTT Working Group for FY 06 Deals; Participation in steps 1-4



RTT Deal Criteria

- 24 months to transition
- $500K-$2.0M
  - Most in 1st year
- High priority need
- High return on investment
- Supported by Fleet/Force, OPNAV, PEO/SYSCOM
- Funding commitment for integration and procurement
- Mature technology [TRL 6-9]
- Technology provider viable
- Navy/USMC infrastructure, PoR, Policy, and CONOPS alignment

Deal Calendar



SEP 05/MAR 06 Deal Selections

Focus Area - GWOT

RTT Deals for ERG SEP 05

- ✓ RTT Data Call letter to ONR, PEO/SYSCOMs - APR 05
- ✓ ONR & PEO/SYSCOM RTT proposals to CTTO – 20 MAY 05
  - ✓ ~130 proposals received from 21 organizations
- ✓ GWOT RTT Working Group review and initial screen - 02 JUN 05
  - ✓ Selected most promising proposals for deal brokering - 17
- ✓ RTT Team review and initial screen of Non-GWOT – 03 JUN 05
  - ✓ Selected most promising proposals – 8 from Data Call, 3 other
- ✓ Due Diligence including Red Team Reviews 06 JUN – 22 JUL
  - – Select best proposals for deals for ERG selection
  - – GWOT RTT Working Group participation and recommendations
- • Assemble Deal package and staffing JUL-AUG 05
- • Signed Deals to ERG for selection mid-SEP 05

Deals to Date

• Deals	55/$210M	NAVAIR 16 deals, ~$70M	NAVSEA 22 deals, ~$89M
• Transitions complete	12		
• Deals in execution	35		
• Deals at risk	1	SPAWAR 9 deals, ~$19M	USMC 8 deals, ~$33M
• Deal failures	7		

Success Rate +85%

• Sea Base	17 deals,~$33M	• DoN Technology	11 deals,~$61M
• Sea Shield	6 deals, ~$46M	• DoD Technology	4 deals, ~$29M
• Sea Strike	6 deals, ~$37M	• US Technology	38 deals, ~$116M
• FORCEnet	26 deals, ~$94M	• Rest of World	2 deals, ~$5M

Video Teleconference over IP

OPERATIONAL NEED

- **Numbered Fleet's #2 IT Requirement**
  - "100% MIGRATION TO IP BASED C5I…"
- **Investment buys:**
  - VIXS solution to end-of-life system (Shipboard Timeplex - 2QFY06), which will disable serial communications off ship
  - Flexibility in shipboard VTC participation, enabling inter-ship video distribution over existing shipboard C4I Network.
  - Reclaim 128kbps for flexible use across the ship vice dedicated use for VTC in one ship space.

IMPACT IF NOT ADDRESSED

- Failure to fund VTC over IP solution will continue practice of wasting scarce RF bandwidth and miss an opportunity to reduce lifecycle costs.
- End of life issue with the Timeplex time-division multiplexers may render all non-IP traffic using wideband SATCOM links un-useable.
- Non-compliance with Fleet Requirement of "100% MIGRATION TO IP BASED C5I…"

PROPOSED SOLUTION

- **Transition Fleet video teleconferencing (VIXS) to a H.323-based IP solution allowing the currently stove piped bandwidth to be dynamically managed.**
- **Lab integration and testing to down select the appropriate COTS H.323 standard products and architecture needed to convert the fleet to IP-based video teleconferencing. Potential candidates [Tandberg, Polycom]**
- **Supports FORCEnet goal of delivering a single common tool suite with guaranteed end-to-end QoS**
- **FORCEnet compliance – CAT 3**

BUSINESS CASE

- **Capability to maximize bandwidth re-use efficiency, reduce life-cycle costs, and minimize afloat manning requirements.**
- **VTC over IP solution reduces NAVY costs by 3% by recovering wasted bandwidth.**
- **COTS solution preferable, as cost to develop Military-only VTC terminal based on our own IP protocols would be between $7-8M**
  - Life-cycle cost of developing and maintaining unique parts and training support infrastructure
  - Investment in a unique production facility

Video Teleconference over IP

TECHNICAL READINESS

- Low risk –
  - Potential compatibility issues with the afloat network infrastructure
  - JWICS connectivity must be maintained
- TRL 9 – with minor hardware and software modifications for Naval use

BUSINESS READINESS

- Low risk –
- Commercial products available- robust market
- Well accepted COTS standards
  - Third Party vendor participation required for minor modifications
  - POR transition plan based on POM 06 submission

TRANSITION SUMMARY

- Transitioning VTC functionality to afloat IP networks will require re-configuration of existing shipboard equipment [32 ships] and the addition of several new network appliances at the Fleet NOCs[4].

PROGRAMMATICS

Stakeholder	FY04/05	FY06	FY07	FY08	FY09	FY10	FY11
PMW-165 PE 0204163N BLI3057/3050	N/A	1.145	1.362	1.069	1.177	1.069	0.96
PE#: 0604231N X2307	1.04	$0	$0	$0	$0	$0	$0
TASK							
Verify requirements Fleet users/NNWC	0.035						
Lab Test and Verify Architecture/Compatibility	0.149						
Determine LAN/NOC Configurations +ILS Assessment	0.211						
E2E Test At Sea	0.515						
Lessons Learned Identification and Integration in Production Solution	0.065						
Develop Standard Plan for Install/Configuration	0.065	0.076					
Field		1.069	1.362	1.069	1.177	1.069	0.96
TOTAL ($7.822M)	1.04	1.145	1.362	1.069	1.177	1.069	0.96

USMC Mobile Electric Power Distribution

OPERATIONAL NEED

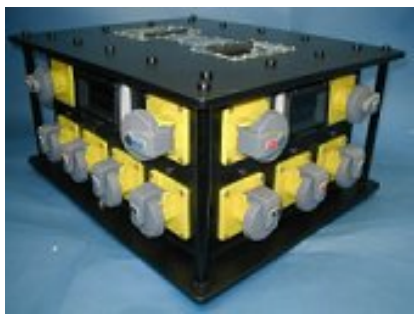
- **Improved Mobile Electric Power Distribution (MEPDIS) system is needed to meet peacetime and wartime demands:**
  - Long lead time to fabricate
  - Excessive weight
  - Expensive
- **Availability of sufficient quantities of MEPDIS to meet OIF II/III needs**

IMPACT IF NOT ADDRESSED

- **Program Manager will not be able to field new capability for 3 years due to limited R&D funding to address need**
- **Insufficient quantities of MEPDIS to meet OIF II/III needs**
- **Fleet Marine Force will:**
  - Locally fabricate unsafe systems
  - Procure untested commercial systems

PROPOSED SOLUTION

- **Test, evaluation, and certification of commercial power distribution product for USMC use.**



BUSINESS CASE

- **30% cheaper**
- **Delivery in 2 weeks, vs 7 months**
- **Man-portable, vs need for forklift**
- **Commercial connector vs Mil-Std**
- **Commercial consumable components**
  - Multiple sources, worldwide availability
- **Adaptors for backward & cross-service compatibility**

USMC Mobile Electric Power Distribution

TECHNICAL READINESS

- **Overall technical risk – LOW (TRL 8)**
- **Coordination with Army continuing (compatibility)**
- **Multiple solutions prototyped and tested**
  - Technical testing
  - Field User Evaluations
- **Final evaluation /selection criteria will be in accordance with Mil-Std-810 and Mil-Prf-28800**
  - Well defined criteria
  - Can be met at Government or commercial labs

BUSINESS READINESS

- **Overall business risk – LOW**
- **Sources Sought Released / Responses rcvd**
- **Market research/Site visits completed**
- **Vendors accustomed to urgent/custom orders**
- **GSA vendors**
- **USMC buy plan is desirable to industry**
  - Continuous, annual buy by PM
  - "Surge" buys from deploying Marines via GSA

TRANSITION SUMMARY

- **CORE funding in place to support MEPDIS purchase at end of transition**
- **Existing, validated requirement in place**
- **Acquisition coordination team efforts underway**
- **Deal funds competitive evaluation of systems**
- **To be executed as an Abbreviated Acquisition Program**

PROGRAMMATICS

Stakeholder	FY04 Funds	FY05 Funds	FY06 - Indef Funds
PM EPS **(Acquisition)**	**$1.0M (current version)**	**$1.5M (current version)**	**$1.5M (new version)**
ASN(RD&A) **PE 0206624M C2929**	**$.612K**		

Task	FY 04	FY 05	FY 06	Total
Procure Test Units	$ 0	$ .18	$ 0	$ .18
Technical Tests	$ 0	$ .32	$ 0	$ .32
User Assessment	$ 0	$ .04	$ 0	$ .04
Down Select	$ 0	$ .02	$ 0	$ .02
Durability Test	$ 0	$ .05	$ 0	$ .05
Total	$ 0	$.612	$ 0	$.612

Transitions to Date

NAVSEA

PEO Aircraft Carriers

- HSLA-65 Steel for CVN21

PEO Integrated Warfare Systems

- Environmentally Adaptive (EA) Algorithms for AN/SQQ-89

PEO Submarines

- Synthetic Aperture Sonar (SAS) for LMRS
- Virginia Class Multi-level Security (MLS)
- All Optical TB-29 Towed Array
- Acoustic Rapid COTS Insertion Maintenance Free Operating Period

VA Class

Strategic Systems Programs (SSP)

- Forever-Ready Trident D-5 Battery Technology

USMC

- Spray Cooling Technology for AAAV

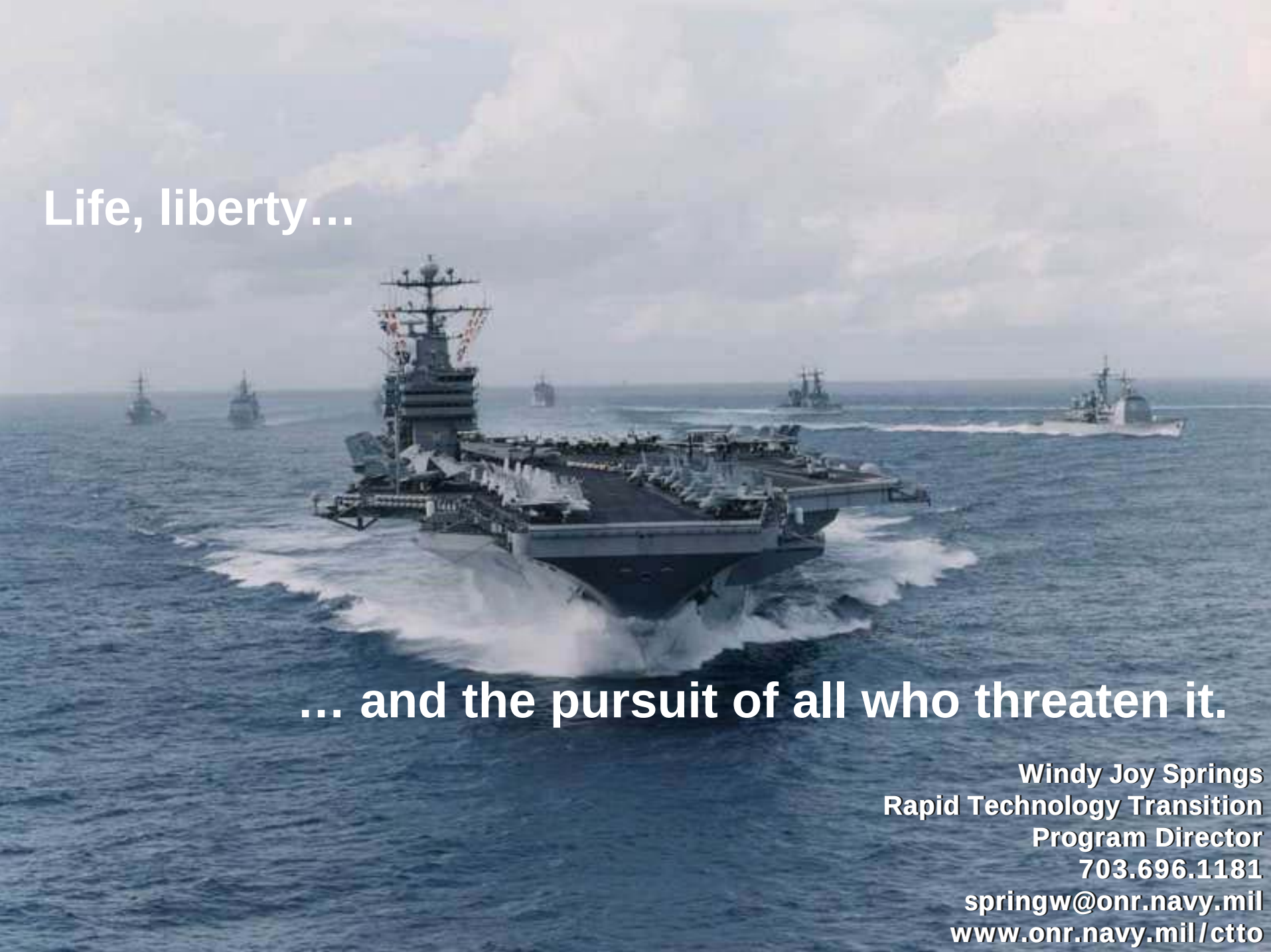
AAAV

NAVAIR

PEO Tactical Air Programs

- Commercial Emulator for E-2C Mission Computer
- Automated Wiring Analysis (AWA)
- Fiber Optic Interconnect Network Technology F/A-18E/F
- Titanium Nitride Coating for T-58 Engine Blades

F/A-18



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GWOT Focus Areas

- Enhanced Theater Security Cooperation
- Maritime Domain Awareness
- Expanded-Maritime Interdiction Operations
- Proliferation Security Initiative
- Lethal and non-lethal options